

REMARKS/ARGUMENTS

Claims 1 to 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shigyo (U.S. 6,878,095) in view of Nozaki et al. (U.S. 5,547,438).

Reconsideration of the application is respectfully requested.

35 U.S.C. §103(a) Rejections

Claims 1 to 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shigyo (U.S. 6,878,095) in view of Nozaki et al. (U.S. 5,547,438).

Shigyo discloses an automatic clutch control system of automatic clutch type transmission to control the automatic clutch when a vehicle is decelerated. (Col. 1, lines 7 to 10).

Nozaki discloses “an apparatus for controlling an engine and a lock-up clutch of a motor vehicle, which apparatus assures smooth engagement of the lock-up clutch even during deceleration of the vehicle.” (Col. 1, lines 55 to 58).

Claim 1 recites “method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train, the method comprising:

controlling the clutch so as to change from an engine braking mode to a free wheeling mode; and

reengaging the clutch when a gas pedal is operated in the free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed.”

As admitted in the Office Action, Shigyo fails to teach or show “reengaging the clutch when a gas pedal is operated in the free-wheeling mode *only when* an engine rotational speed is above a transmission input rotational speed” as recited in claim 1. *Shigyo does not teach the determination of the engine rotational speed nor the transmission input rotational speed and therefore is not capable of addressing such a step.* Reengagement of the clutch is not discussed at all and is clearly independent of the engine rotational speed or transmission input rotational speed.

Moreover Nozaki also does not show “reengaging the clutch when the gas pedal is operated only when an engine rotational speed is above a transmission input rotational speed” as claimed. First of all, gas pedal operation is not an issue, as the controller in Nozaki maintains an

engine speed (see col. 5, lines 5 to 6) apparently independently of the gas pedal. In addition, Nozaki clearly permits the engine speed to be lowered below the transmission input speed. Column 11, lines 11 to 13.

In addition, it would not have been obvious to one skilled in the art to combine Shigyo and Nozaki et al. as Shigyo is not concerned with engine or transmission speed but uses other sensors. Also, there is no motivation to combine Shigyo and Nozaki et al.

Furthermore, the Office Action is in clear error asserting “All the claimed elements were known in the prior art and one skilled in the art *could* have combined the elements as claimed.” The correct standard is not whether a person of skill in the art *could* have combined but rather would have combined the prior art.

Withdrawal of the rejection of independent claim 1 under 35 U.S.C. §103(a) and dependent claims 2 to 17 is respectfully requested.

Claim 18 recites “drive train comprising:

a drive motor;

a manual transmission; and

a clutch connecting the drive motor and the manual transmission; and

a controller capable of automatically controlling the manual transmission, the controller capable of automatically changing an engine braking mode to a free-wheeling mode and reengaging the clutch when a gas pedal is operated in the free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed.”

As discussed above, Shigyo fails to teach or show “reengaging the clutch when a gas pedal is operated in the free-wheeling mode *only when* an engine rotational speed is above a transmission input rotational speed” as recited in claim 18. Shigyo does not teach the determination of the engine rotational speed nor the transmission input rotational speed and therefore is not capable of performing such a function. Nozaki also does not show this limitation as discussed above.

In addition, it would not have been obvious to one skilled in the art to combine Shigyo and Nozaki et al. Also, there is no motivation to combine Shigyo and Nozaki et al.

Furthermore, the Office Action is in clear error asserting “All the claimed elements were known in the prior art and one skilled in the art *could* have combined the elements as claimed.” The correct standard is not whether a person of skill in the art *could* have combined but rather would have combined the prior art.

Withdrawal of the rejection of independent claim 18 under 35 U.S.C. §103(a) and dependent claim 19 is respectfully requested.

Claim 20 recites “a method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train, the method comprising:

controlling the clutch so as to change from an engine braking mode to a free-wheeling mode, wherein the clutch is disengaged to implement the free-wheeling mode when a transmission gear is equal to or less than a maximum free-wheeling gear.”

Shigyo does not teach or show “the clutch is disengaged to implement the free-wheeling mode when a transmission gear is equal to or less than a maximum free-wheeling gear.” The Office action asserts Column 6, lines 4 to 6, however this does not teach the transmission gear being equal to or less than the maximum free-wheeling gear at all. Nozaki also does not show this feature.

In addition, it would not have been obvious to one skilled in the art to combine Shigyo and Nozaki et al. Also, there is no motivation to combine Shigyo and Nozaki et al.

Furthermore, the Office Action is in clear error asserting “All the claimed elements were known in the prior art and one skilled in the art *could* have combined the elements as claimed.” The correct standard is not whether a person of skill in the art *could* have combined but rather would have combined the prior art.

Withdrawal of the rejection of independent claim 20 under 35 U.S.C. §103(a) is respectfully requested.

Claim 21 recites “a method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train, the method comprising:

controlling the clutch so as to change from an engine braking mode to a free-wheeling mode, wherein the clutch is disengaged to implement the free-wheeling mode when a vehicle's driving speed is less than a maximum free-wheeling speed."

Shigyo fails to teach or show "the clutch is disengaged to implement the free-wheeling mode when a vehicle's driving speed is less than a maximum free-wheeling speed," as recited in claim 21. A maximum free wheeling speed apparently is irrelevant in Shigyo.

In addition, it would not have been obvious to one skilled in the art to combine Shigyo and Nozaki et al. Also, there is no motivation to combine Shigyo and Nozaki et al.

Furthermore, the Office Action is in clear error asserting "All the claimed elements were known in the prior art and one skilled in the art *could* have combined the elements as claimed." The correct standard is not whether a person of skill in the art *could* have combined but rather would have combined the prior art. Withdrawal of the rejection of independent claim 21 under 35 U.S.C. §103(a) is respectfully requested.

Claim 22 recites "a method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train, the method comprising:

controlling the clutch so as to change from an engine braking mode to a free-wheeling mode, wherein the clutch is disengaged to implement the free-wheeling mode when no downhill driving is detected."

As admitted in the Office Action, Shigyo does not teach or show "the clutch is disengaged to implement the free-wheeling mode when no downhill driving is detected," as claimed in claim 22. ***The Office Action cites Nozaki et al. column 6, lines 34 to 53, however there is no mention of free-wheeling nor do the disengaged first and second gears reference "no downhill driving being detected."***

In addition, even if Nozaki et al. were to teach of this, it would not have been obvious to one skilled in the art to combine Shigyo and Nozaki et al. Also, there is no motivation to combine Shigyo and Nozaki et al.

Furthermore, the Office Action is in clear error asserting "All the claimed elements were known in the prior art and one skilled in the art *could* have combined the elements as claimed."

The correct standard is not whether a person of skill in the art *could* have combined but rather would have combined the prior art.

Withdrawal of the rejection of independent claim 22 under 35 U.S.C. §103(a) is respectfully requested.

CONCLUSION

The present application is respectfully submitted as being in condition for allowance and applicants respectfully request such action.

If any additional fees are deemed to be due at this time, the Assistant Commissioner is authorized to charge payment of the same to Deposit Account No. 50-0552.

Respectfully submitted,

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